WHAT IS CLAIMED IS:

1. A method for transmitting and receiving customer data in a fault-tolerant ring network comprised of a plurality of nodes with adjacent pairs of nodes linked by at least one of a service link and a protection link, with at least a first and second adjacent nodes only linked by a protection link, comprising the steps of:

transmitting and receiving a first type of data using the service links when the network is in a no-fault condition; and

transmitting and receiving the first type of data using one or more of the protection links when the network is in a fault condition.

2. The method of claim 1, further comprising:

transmitting and receiving a second type of data using the protection links when the network is in a no-fault condition; and

suspending transmission of the second type of data over one or more of the protection links when the network is in a fault condition.

3. The method of claim 2, wherein the second type of data includes pre-emptable data.

4. A method for communication among nodes of a fault-tolerant ring network, comprising:

dividing the nodes into groups;

dividing traffic into a first type of data and a second type of data;

communicating the first type of data between two or more nodes; and

communicating the second type of data between nodes of different groups.

5. The method of claim 4, further comprising:

communicating the first type of data between nodes of different groups when a fault is detected in the network; and

suspending communications of the second type of data between nodes that are adjacent to the fault.

6. A method for operating an end node of a group of a plurality of groups of contiguous nodes in a fault-tolerant ring network, the end node being one of two nodes in the group that is adjacent to only one other node of the group, the method comprising:

transmitting and receiving a first type of data to and from the other node when a fault is not detected; and

transmitting and receiving the first type of data to and from an end node of an adjacent group when the fault is detected.

7. The method of claim 6, further comprising:

transmitting and receiving a second type of data to and from the end node of the adjacent group when the fault is not detected; and

suspending transmission and reception of the second type of data to and from the end node of the adjacent group when the fault is detected.

8. The method of claim 7, wherein the second type of data includes pre-emtable data.

9. A fault-tolerant ring network of nodes, comprising:

protection links between pairs of adjacent nodes of the ring network;

two or more groups of contiguous nodes of the ring network; and

service links between two or more adjacent nodes of the ring network, but not between adjacent nodes of different groups.

10. The network of claim 9, wherein a first type of data is transmitted and received using only the service links when the network is in a no-fault condition, and using one or more of the protection links when the network is in a fault condition.

11. The network of claim 10, wherein a second type of data is transmitted and received using the protection links when the network is in a no-fault condition, and transmission of the second type of data is suspended over one or more of the protection links when the network is in a fault condition.

12. The network of claim 11, wherein the second type of data includes pre-emptable data.

13. A fault-tolerant ring network, comprising:

a plurality of nodes divided into groups; and

a first type of data and a second type of data, wherein the first type of data is communicated between at least two of the nodes, and

the second type of data is communicated between nodes of different groups.

14. The network of claim 13, wherein the first type of data is communicated between nodes of different groups when a fault is detected in the network and communications of the second type of data between nodes that are adjacent to the fault is suspended.